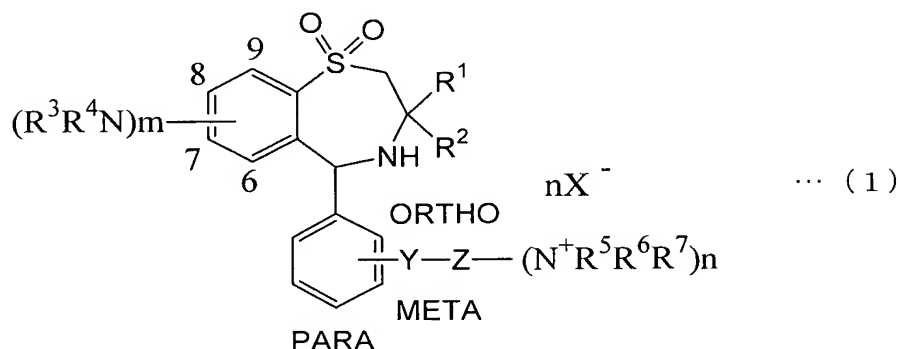


1. A compound represented by formula (1) below.



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m represents an integer of 1 or 2, and R³ and R⁴, which may be mutually different, each represents an alkyl group having from 1 to 5 carbon atoms:

Y represents any one of -NHCS-, -NHCSNH-, and -NHCSO- where the -NH in the -NHCS- represents a bond which links with an adjacent benzene ring and the CS- in the -NHCS- represents a bond which links with an adjacent Z, and the -NH in the -NHCSO- represents a bond which links with an adjacent benzene ring and the CSO- in the -NHCSO- represents a bond which links with an adjacent Z;

Z- $(N^+R^5R^6R^7)_n$ represents an alkyl group having from 2 to 10 carbon atoms or an alkenyl group having from 2 to 10 carbon atoms which is substituted with n $(-N^+R^5R^6R^7)_s$, where at least one of methylenes which constitute Z may be replaced by any one of a

phenylene and an -O-; n is an integer of 1 or 2; and $N^+R^5R^6R^7$ is any one of I), II), and III) given below which are mutually independent

I) R^5 , R^6 , and R^7 , which may be mutually different, each represents any one of an alkyl group having from 1 to 10 carbon atoms, an alkenyl group having from 2 to 10 carbon atoms, and an alkynyl group having from 2 to 10 carbon atoms, where the alkyl group, the alkenyl group, and the alkynyl group may be substituted with at least one of a phenyl group, a naphthyl group, a pyridyl group, a quinolyl group, a thienyl group, a furyl group, a piperidyl group, a pyrrolidyl group, a morpholyl group, a cycloalkyl group having from 3 to 7 carbon atoms, a cyano group, a nitro group, a hydroxyl group, an oxo group, a thioxo group, a carboxyl group, a $-CONH_2$ group, an $-SO_3H$ group, and further, at least one of methylenes which constitute the alkyl group, the alkenyl group, and the alkynyl group may be replaced by any one of a phenylene, a thienylene, a furylene, a cyclohexylene, a cyclopentylene, an -O-, an -S-, a $-CO_2-$, an $-NHCO-$, an $-NR^8-$, and an $-N^+W^-R^9R^{10}-$ where R^8 represents an alkyl group having from 1 to 5 carbon atoms or an alkenyl group having from 2 to 5 carbon atoms and the alkyl group and alkenyl group represented by R^8 may be substituted with at least one of a phenyl group, a cycloalkyl group having from 3 to 7 carbon atoms, and a hydroxyl group; R^9 and R^{10} , which may be mutually different, each represents an alkyl group or alkenyl group having from 1 to 5 carbon atoms and may be substituted with at least one of a phenyl group, a cycloalkyl group having from 3 to 7 carbon atoms, and a hydroxyl group; and W^- represents a counter anion,

II) $N^+R^5R^6R^7$ represents a monocyclic ring or a bicyclic ring which is formed by 4 to 9 carbon atoms in addition to an ammonium nitrogen atom, provided that the position of its bonding with Z is the ammonium nitrogen atom, where one of the carbon atoms which constitute the ring in the monocyclic ring and the bicyclic ring may be replaced by any one atom of oxygen, nitrogen, and sulfur, and moreover, the monocyclic ring and the bicyclic ring may be substituted with at least one of a hydroxyl group, an oxo group, a thioxo group, a cyano group, a phenyl group, a naphthyl group, a thienyl group, a pyridyl group, a cycloalkyl group having from 3 to 7 carbon atoms, a carboxyl group, a $-CONH_2$ group, an $-SO_3H$ group, and an $-R^{11}$ group; R^{11} represents an alkyl group having from 1 to 8 carbon atoms or an alkenyl group having from 2 to 8 carbon atoms, where the alkyl group and the alkenyl group represented by R^{11} may be substituted with at least one of a phenyl group, a naphthyl group, a pyridyl group, a quinolyl group, a thienyl group, a furyl group, a piperidyl group, a pyrrolidyl group, a morpholyl group, a cycloalkyl group having from 3 to 7 carbon atoms, a cyano group, a nitro group, a hydroxyl group, an oxo group, a thioxo group, a carboxyl group, a $-CONH_2$ group, and an $-SO_3H$ group; moreover, at least one of methylenes which constitute the alkyl group and the alkenyl group may be replaced by any one of a phenylene, a thienylene, a furylene, a cyclohexylene, a cyclopentylene, an $-O-$, an $-S-$, a $-CO_2-$, an $-NHCO-$, an $-NR^8-$, and an $-N^+W-R^9R^{10}-$, where R^8 , R^9 , R^{10} , and W are as described above; among R^5 , R^6 , and R^7 , a group which is not involved in formation of the monocyclic ring and the bicyclic ring is the same as

that in I) described above,

III) $N^+R^5R^6R^7$ represents a pyridinium ring, a quinolinium ring, or an isoquinolinium ring, provided that the position of its bonding with Z is an ammonium nitrogen atom; the pyridinium ring, the quinolinium ring, and the isoquinolinium ring may be substituted with at least one of a cyano group, a nitro group, a phenyl group, a naphthyl group, a thienyl group, a pyridyl group, a cycloalkyl group having from 3 to 7 carbon atoms, an alkoxy group having from 1 to 5 carbon atoms, a carboxyl group, a $-CONH_2$ group, an $-SO_3H$ group, and an $-R^{12}$ group; R^{12} represents an alkyl group having from 1 to 9 carbon atoms or an alkenyl group having from 2 to 9 carbon atoms; and the alkyl group and the alkenyl group represented by R^{12} may be substituted with at least one of a phenyl group, a naphthyl group, a pyridyl group, a quinolyl group, a thienyl group, a furyl group, a cycloalkyl group having from 3 to 7 carbon atoms, a cyano group, a nitro group, a hydroxyl group, an oxo group, a thioxo group, a carboxyl group, a $-CONH_2$ group, and an $-SO_3H$ group; and further, at least one of methylenes which constitute the alkyl group and the alkenyl group may be replaced by any one of a phenylene, a thienylene, a furylene, a cyclohexylene, a cyclopentylene, an $-S-$, a $-CO_2-$, an $-NHCO-$, an $-NR^8-$, and an $-N^+W^-R^9R^{10}-$, where R^8 , R^9 , R^{10} , and W^- are as described above, and

X^- represents a counter anion].

2. The compound according to claim 1, wherein the $Z-(N^+R^5R^6R^7)_n$ represents an alkyl group having from 2 to 10 carbon atoms which is

substituted with n $(-N^+R^5R^6R^7)$ s and at least one of methylenes which constitute Z may be replaced by any one of a phenylene and an -O-.

3. The compound according to claim 2, wherein the $Z-(N^+R^5R^6R^7)_n$ represents a straight chain alkyl group having from 2 to 10 carbon atoms which is substituted with one $-N^+R^5R^6R^7$ and at least one of methylenes which constitute Z may be replaced by any one of a phenylene and an -O-.

4. The compound according to claim 3, wherein the $Z-(N^+R^5R^6R^7)_n$ represents a straight chain alkyl group having from 2 to 10 carbon atoms which is substituted with one $-N^+R^5R^6R^7$, a straight chain alkyl group having from 2 to 10 carbon atoms which is substituted with one $-N^+R^5R^6R^7$ and one of methylenes which constitute Z is replaced by a phenylene, a straight chain alkyl group having from 2 to 10 carbon atoms which is substituted with one $-N^+R^5R^6R^7$ and one of methylenes which constitute Z is replaced by an -O-, or a straight chain alkyl group having from 2 to 10 carbon atoms which is substituted with one $-N^+R^5R^6R^7$ and one of methylenes which constitute Z is replaced by a phenylene and another of methylenes which constitute Z is replaced by an -O-.

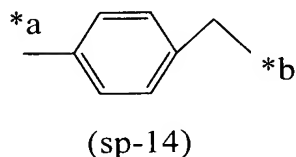
5. The compound according to claim 4, wherein Z represents a straight chain methylene group having from 2 to 10 carbon atoms, a straight chain methylene group having from 2 to 10 carbon atoms of

- which one methylene is replaced by a phenylene, a straight chain methylene group having from 2 to 10 carbon atoms of which one methylene is replaced by an -O-, or a straight chain methylene group having from 2 to 10 carbon atoms of which one methylene is replaced
- 5 by a phenylene and another methylene is replaced by an -O-.
6. The compound according to claim 5, wherein Z represents a straight chain methylene group having from 2 to 10 carbon atoms.
- 10 7. The compound according to claim 5, wherein Y represents -NHCS- or -NHCSNH- at the para- or meta-position.
8. The compound according to claim 6, wherein Y represents -NHCS- or -NHCSNH- at the para- or meta-position.
- 15 9. The compound according to claim 8, wherein Y represents -NHCSNH- at the meta-position; and Z represents a straight chain methylene group having from 2 to 10 carbon atoms.
- 20 10. The compound according to claim 8, wherein Y represents -NHCS- at the meta-position; and Z represents a straight chain methylene group having from 2 to 10 carbon atoms.
11. The compound according to claim 10, wherein Y represents
- 25 -NHCS- at the meta-position; and Z represents a straight chain

methylene group having 5 carbon atoms.

12. The compound according to claim 5, wherein Y represents -NHCSNH- at the meta-position; and Z represents a straight chain methylene group having from 2 to 10 carbon atoms of which one methylene is replaced by a phenylene.

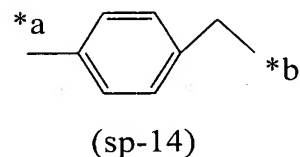
13. The compound according to claim 8, wherein Y represents -NHCS- or -NHCSNH- at the meta-position; and Z is represented by formula (sp-14)



- [wherein *a is bonded to Y in the formula (1) and *b is bonded to $N^+R^5R^6R^7$].

14. The compound according to claim 12, wherein Y represents -NHCSNH- at the meta-position; and Z is represented by formula (sp-14)

20



[wherein *a is bonded to Y in the formula (1) and *b is bonded to $N^+R^5R^6R^7$].

- 5 15. The compound according to any one of claims 1 to 14, wherein $N^+R^5R^6R^7$ is any one of I), II), and III) given below which are mutually independent:
- I) R^5 , R^6 , and R^7 , which may be mutually different, each represents any one of an alkyl group having from 1 to 10 carbon atoms, an alkenyl group having from 3 to 8 carbon atoms, and an alkynyl group having from 3 to 9 carbon atoms, where the alkyl group, the alkenyl group, and the alkynyl group may be substituted with at least one of a phenyl group, a thienyl group, a cyclohexyl group, a cyano group, a hydroxyl group, an oxo group, a carboxyl group, a $-CONH_2$ group, and an $-SO_3H$ group, and further, at least one of methylenes which constitute the alkyl group, the alkenyl group, and the alkynyl group may be replaced by any one of a phenylene, a thienylene, a furylene, an $-O-$, a $-CO_2-$, an $-NHCO-$, an $-NR^8-$, and an $-N^+WR^9R^{10}-$ where R^8 represents an alkyl group having from 1 to 3 carbon atoms or an alkenyl group having 3 carbon atoms and the alkyl group may be substituted with at least one of a phenyl group and a hydroxyl group; R^9 and R^{10} , which may be mutually different, each represents an alkyl group having from 1 to 3 carbon atoms or an alkenyl group having 3 carbon atoms and the alkyl group may be substituted with at least one of a phenyl group and a hydroxyl group,
- 10
15
20
25

II) $N^+R^5R^6R^7$ represents a monocyclic ring or a bicyclic ring which is any one of a pyrrolidinium ring, a piperidinium ring, a morpholinium ring, a thiomorpholinium ring, a piperazinium ring, an azepanium ring, a quinuclidinium ring, and a 1,4-diazabicyclo[2.2.2]octanium ring, provided that the position of its bonding with Z is an ammonium nitrogen atom; the monocyclic ring and the bicyclic ring may be substituted with at least one of a hydroxyl group, an oxo group, a cyano group, a phenyl group, a $-CONH_2$ group, and an $-R^{11}$ group; R^{11} represents an alkyl group having from 1 to 6 carbon atoms or an alkenyl group having 3 carbon atoms, where the alkyl group represented by R^{11} may be substituted with at least one of a hydroxyl group, a cyano group, a phenyl group, and a $-CONH_2$ group; moreover, at least one of methylenes which constitute the alkyl group may be replaced by any one of an $-O-$, a $-CO_2-$, and an $-NHCO-$; among R^5 , R^6 , and R^7 , a group which is not involved in formation of the ring represents an alkyl group having 1 to 6 carbon atoms, an alkenyl group having 3 to 4 carbon atoms, or an alkynyl group having 3 to 6 carbon atoms; the alkyl group, the alkenyl group, and the alkynyl group represented by R^5 , R^6 , or R^7 may be substituted with at least one of a phenyl group, a thienyl group, a furyl group, a piperidyl group, a pyrrolidyl group, a morpholyl group, a cyclopropyl group, a cyclopentyl group, a cyano group, a hydroxyl group, an oxo group, a nitro group, a carboxyl group, an $-CONH_2$ group, and an $-SO_3H$ group; and moreover, at least one of methylenes which constitute the alkyl group may be replaced by any one of a phenylene, an $-O-$, and a $-CO_2-$,

III) $N^+R^5R^6R^7$ represents a pyridinium ring, a quinolinium ring, or an isoquinolinium ring, provided that the position of its bonding with Z is an ammonium nitrogen atom; the pyridinium ring and the quinolinium ring may be substituted with at least one of a cyano group, a nitro group, a phenyl group, a thienyl group, a pyridyl group, an alkoxy group having from 1 to 3 carbon atoms, a carboxyl group, a $-CONH_2$ group, and an $-R^{12}$ group; R^{12} represents an alkyl group having from 1 to 9 carbon atoms or an alkenyl group having from 2 to 4 carbon atoms; and the alkyl group and the alkenyl group represented by R^{12} may be substituted with at least one of a phenyl group, a naphthyl group, a pyridyl group, a cyano group, a nitro group, a hydroxyl group, an oxo group, a carboxyl group, and an $-SO_3H$ group; and further, at least one of methylenes which constitute the alkyl group and the alkenyl group may be replaced by any one of an $-S-$, a $-CO_2-$, an $-NHCO-$, and an $-NR^8-$ where R^8 represents an alkyl group having 1 to 3 carbon atoms and the alkyl group may be substituted with at least one hydroxyl group.

16. The compound according to any one of claims 1 to 14, wherein $N^+R^5R^6R^7$ is any one of I), II), and III) given below which are mutually independent:

I) R^5 , R^6 , and R^7 , which may be mutually different, each represents a straight chain alkyl group having from 1 to 10 carbon atoms, a straight chain alkenyl group having from 3 to 6, or 8 carbon atoms, a branched alkenyl group having 4, 6, or 7 carbon atoms, a straight chain alkynyl group having from 3, 5, 6, 7, or 9 carbon atoms,

or a branched alkynyl group having 6 carbon atoms, in which 1) the alkyl group, alkenyl group, and alkynyl group represented by R^5 , R^6 , and R^7 are substituted with any one of a phenyl group, a thienyl group, a cyclohexyl group, a cyano group, a hydroxyl group, an oxo group, a carboxyl group, a $-\text{CONH}_2$ group, and an $-\text{SO}_3\text{H}$ group, 2) the alkyl group, the alkenyl group, and the alkynyl group are substituted with two hydroxyl groups, 3) the alkyl group, the alkenyl group, and the alkynyl group are substituted with one hydroxyl group and one $-\text{SO}_3\text{H}$ group, 4) the alkyl group, the alkenyl group, and the alkynyl group are substituted with one oxo group and one phenyl group, 5) the alkyl group, the alkenyl group, and the alkynyl group are substituted with one hydroxyl group and two phenyl groups, 6) one of methylenes which constitute the alkyl group, the alkenyl group, and the alkynyl group is replaced by any one of a phenylene, a furylene, a $-\text{CO}_2-$, an $-\text{NHCO}-$, an $-\text{NR}^8-$ (where R^8 represents a methyl group, an ethyl group, an n-propyl group, a 2-propenyl group, a 2-hydroxyethyl group, a 2-hydroxypropyl group, or a benzyl group), and an $-\text{N}^+\text{W}^-\text{R}^9\text{R}^{10}-$ (where R^9 and R^{10} each represents a methyl group, an ethyl group, an n-propyl group, a 2-propenyl group, a 2-hydroxyethyl group, or a benzyl group), 7) two of methylenes which constitute the alkyl group, the alkenyl group, and the alkynyl group are replaced by any one selected from two $(-\text{O}-)$ s, one phenylene and one $-\text{O}-$, one $-\text{O}-$ and one $-\text{NR}^8-$, and one $-\text{NHCO}-$ and one $-\text{O}-$, 8) three of methylenes which constitute the alkyl group, the alkenyl group, and the alkynyl group are replaced by any one selected from two $(-\text{O}-)$ s and one $-\text{NR}^8-$, or one phenylene and two $(-\text{NHCO}-)$ s, 9)

the alkyl group, the alkenyl group, and the alkynyl group are substituted with one hydroxyl group, and moreover, one of methylenes which constitute the alkyl group, the alkenyl group, and the alkynyl group is replaced by an -O-, 10) the alkyl group, the alkenyl group, and the alkynyl group are substituted with one hydroxyl group, and moreover, one of methylenes which constitute the alkyl group, the alkenyl group, and the alkynyl group is replaced by an -NR⁸-, 11) the alkyl group, the alkenyl group, and the alkynyl group are substituted with one hydroxyl group, and moreover one of methylenes which constitute the alkyl group, the alkenyl group, and the alkynyl group is replaced by a furylene, 12) the alkyl group, the alkenyl group, and the alkynyl group are substituted with one oxo group, and moreover, one of methylenes which constitute the alkyl group, the alkenyl group, and the alkynyl group is replaced by a thienylene, or 13) the alkyl group, the alkenyl group, and the alkynyl group are substituted with one oxo group, and moreover, two of methylenes which constitute the alkyl group, the alkenyl group, and the alkynyl group are replaced by one -O- and one phenylene, or the alkyl group, alkenyl group, and alkynyl group are neither substituted nor replaced,

20 II) $N^+R^5R^6R^7$ represents a monocyclic ring or a bicyclic ring which is any one of a pyrrolidinium ring, a piperidinium ring, a morpholinium ring, a thiomorpholinium ring, a piperazinium ring, an azepanium ring, a quinuclidinium ring, and a 1,4-diazabicyclo[2.2.2]octanium ring, provided that the position of its bonding with Z is an ammonium

25 nitrogen atom; the monocyclic ring and the bicyclic ring are 1)

substituted with any one of a hydroxyl group, an oxo group, a cyano group, a phenyl group, a -CONH_2 group, and an -R^{11} group, 2) substituted with one cyano group and one hydroxyl group, 3) substituted with one hydroxyl group and one -R^{11} , 4) substituted with one oxo group and one -R^{11} , 5) substituted with two oxo groups, or 6) substituted with two (-R^{11}) s, or the monocyclic ring and the bicyclic ring are unsubstituted, where R^{11} represents any one of a methyl group, an ethyl group, an n-propyl group, an n-butyl group, an n-pentyl group, a 2-propenyl group, a benzyl group, an acetylamino group, a t-butoxycarbonylamino group, a hydroxymethyl group, a 2-hydroxyethyl group, a 3-hydroxypropyl group, a 2-cyanoethoxy group, a (2-cyanoethoxy)methyl group, a 2-carbamoylethoxy group, an ethoxycarbonyl group, a t-butoxycarbonyl group, a benzoyloxy group, a phenylacetylamino group, a butanoylamino group, and a pentanoylamino group; among R^5 , R^6 , and R^7 , a group which is not involved in formation of the ring represents a straight chain alkyl group having from 1 to 6 carbon atoms, a straight chain alkenyl group having from 3 to 4 carbon atoms, or a straight chain alkynyl group having 3, 4, or 6 carbon atoms, and 1) the alkyl group, the alkenyl group, and the alkynyl group represented by R^5 , R^6 , or R^7 are substituted with any one of a phenyl group, a thienyl group, a furyl group, a piperidyl group, a pyrrolidyl group, a morpholyl group, a cyclopropyl group, a cyclopentyl group, a cyano group, a hydroxyl group, a carboxyl group, and an $\text{-SO}_3\text{H}$ group, 2) the alkyl group, the alkenyl group, and the alkynyl group are substituted with two hydroxyl groups, 3) the alkyl group, the

alkenyl group, and the alkynyl group are substituted with one hydroxyl group and one $-\text{SO}_3\text{H}$, 4) the alkyl group, the alkenyl group, and the alkynyl group are substituted with four hydroxyl groups and one oxo group, 5) the alkyl group, the alkenyl group, and the alkynyl group are substituted with one nitro group and one morpholyl group, 6) one of methylenes which constitute the alkyl group, the alkenyl group, and the alkynyl group is replaced by a $-\text{CO}_2-$, or 7) the alkyl group, the alkenyl group, and the alkynyl group are substituted with one morpholyl group and moreover, one of methylenes which constitute the alkyl group, the alkenyl group, and the alkynyl group is replaced by an $-\text{O}-$, or the alkyl group, the alkenyl group, and the alkynyl group are neither substituted nor replaced,

III) $\text{N}^+\text{R}^5\text{R}^6\text{R}^7$ represents any one of 1) a pyridinium ring substituted with any one of a cyano group, a phenyl group, a thienyl group, a pyridyl group, a methoxy group, an ethoxy group, a propoxy group, a carboxyl group, a $-\text{CONH}_2$ group, and a $-\text{R}^{12}$ group, 2) a pyridinium ring substituted with two cyano groups, 3) a pyridinium ring substituted with two $(-\text{R}^{12})$ s, 4) a pyridinium ring substituted with one cyano group and one $-\text{R}^{12}$, 5) a pyridinium ring substituted with one phenyl group and one $-\text{R}^{12}$, 6) a quinolinium ring substituted with any one of a cyano group, a nitro group, a carboxyl group, a methoxy group, an ethoxy group, a propoxy group, and $-\text{R}^{12}$, 7) a quinolinium ring substituted with one methoxy group and one $-\text{R}^{12}$, 8) a quinolinium ring substituted with one nitro group and one $-\text{R}^{12}$, 9) an unsubstituted pyridinium ring, 10) an unsubstituted quinolinium ring, and 11) an unsubstituted

isoquinolinium ring, where R^{12} represents any one of a methyl group, an ethyl group, an n-propyl group, an i-propyl group, an n-butyl group, a t-butyl group, an n-pentyl group, a 3-pentyl group, a 5-nonyl group, a vinyl group, a benzyl group, a 3-phenylpropyl group, a

5 2-(1-naphthyl)vinyl group, a hydroxymethyl group, a 2-hydroxyethyl group, a 3-hydroxypropyl group, a formyl group, an acetyl group, a propionyl group, a benzoyl group, a methoxycarbonyl group, an ethoxycarbonyl group, a butoxycarbonyl group, a hexoxycarbonyl group, a benzyloxycarbonyl group, a 2-propenyloxycarbonyl group, an

10 ethoxycarbonylmethyl group, a 2- (methoxycarbonyl)ethyl group, an ethoxycarbonylmethylcarbonyl group, a 2-hydroxyethylaminocarbonyl group, a bis(2-hydroxyethyl)aminocarbonyl group, a 2-carboxyvinyl group, a carboxymethylthio group, a cyanomethyl group, a 2-nitrovinyl group, a 2-(4-pyridyl)ethyl group, a 2-(4-pyridyl)vinyl group, a

15 3-(4-pyridyl)propyl group, a 2-(4-pyridyl)-1,2-dihydroxyethyl group, and a 2-sulfoethyl group, provided that the position of its bonding with Z is an ammonium nitrogen atom.

17. The compound according to any one of claims 1 to 14, wherein

20 $N^+R^5R^6R^7$ is any one of I), II), and III) given below which are mutually independent:

I) R^5 , R^6 , and R^7 , which may be mutually different, each represents any one of a straight chain alkyl group having from 1 to 10 carbon atoms, a straight chain alkyl group having from 1 to 10 carbon

25 atoms which is substituted with one phenyl group, a straight chain alkyl

group having from 1 to 10 carbon atoms which is substituted with one hydroxyl group, a straight chain alkenyl group having from 3 to 6, or 8 carbon atoms, a branched alkenyl group having 4, 6, or 7 carbon atoms, a straight chain alkynyl group having 3, 5, 6, 7, or 9 carbon atoms, and
5 a branched alkynyl group having 6 carbon atoms,

II) $N^+R^5R^6R^7$ represents a pyrrolidinium ring, a piperidinium ring, an azepanium ring, a quinuclidinium ring, or a 1,4-diazabicyclo[2.2.2]-octanium ring, substituted with any one of a methyl group, an ethyl group, an n-propyl group, an n-butyl group, an n-pentyl group, a
10 2-propenyl group, a phenyl group, a benzyl group, a hydroxyl group, a hydroxymethyl group, a 2-hydroxyethyl group, and a 3-hydroxypropyl group, or unsubstituted, provided that the position of its bonding with Z is an ammonium nitrogen atom; among R^5 , R^6 , and R^7 , a group which is not involved in formation of the ring represents any one of a straight
15 chain alkyl group having from 1 to 6 carbon atoms, a straight chain alkyl group having from 1 to 6 carbon atoms which is substituted with one phenyl group, a straight chain alkyl group having from 1 to 6 carbon atoms which is substituted with one hydroxyl group, a straight chain alkenyl group having from 3 to 4 carbon atoms, and a straight chain
20 alkynyl group having 3, 4, or 6 carbon atoms,

III) $N^+R^5R^6R^7$ represents an unsubstituted pyridinium ring, an unsubstituted quinolinium ring, an unsubstituted isoquinolinium ring, a pyridinium ring substituted with any one of a methyl group, an ethyl group, an n-propyl group, an i-propyl group, an n-butyl group, a t-butyl
25 group, an n-pentyl group, a vinyl group, a phenyl group, a benzyl

group, a 3-phenylpropyl group, a hydroxymethyl group, a
2-hydroxyethyl group, and a 3-hydroxypropyl group, a pyridinium ring
substituted with any one selected from two methyl groups or two ethyl
groups, a pyridinium ring substituted with one phenyl group and one
5 methyl group, or a quinolinium ring substituted with any one of a
methyl group and an i-propyl group, provided that the position of its
bonding with Z is ammonium nitrogen atom.

18. The compound according to claim 15, wherein R^1 and R^2 , which
10 may be mutually different, each represents a straight chain alkyl group
having 2 to 6 carbon atoms, and $(NR^3R^4)_m$ represents any one of a
dimethylamino group substituting at the 7-position, a diethylamino
group substituting at the 7-position, an ethylmethylamino group
substituting at the 7-position, a dimethylamino group substituting at the
15 9-position, and dimethylamino groups substituting at the 7- and
9-positions.

19. The compound according to claim 16, wherein R^1 and R^2 , which
may be mutually different, each represents a straight chain alkyl group
20 having 2 to 6 carbon atoms, and $(NR^3R^4)_m$ represents any one of a
dimethylamino group substituting at the 7-position, a diethylamino
group substituting at the 7-position, an ethylmethylamino group
substituting at the 7-position, a dimethylamino group substituting at the
9-position, and dimethylamino groups substituting at the 7- and
25 9-positions.

20. The compound according to claim 17, wherein R^1 and R^2 , which may be mutually different, each represents a straight chain alkyl group having 2 to 6 carbon atoms, and $(NR^3R^4)_m$ represents any one of a
5 dimethylamino group substituting at the 7-position, a diethylamino group substituting at the 7-position, an ethylmethylamino group substituting at the 7-position, a dimethylamino group substituting at the 9-position, and dimethylamino groups substituting at the 7- and 9-positions.

10

21. The compound according to claim 18, wherein $(NR^3R^4)_m$ represents any one of a dimethylamino group substituting at the 7-position, a diethylamino group substituting at the 7-position, and an ethylmethylamino group substituting at the 7-position, and $N^+R^5R^6R^7$
15 represents any one of a 4-t-butylpyridinium group, a 3-(3-hydroxypropyl)-pyridinium group, a 3-[2-(methoxycarbonyl)ethyl]-pyridinium group, a 2-(n-propyl)-pyridinium group, a 4-phenylquinuclidinium group, and a 1,4-diazabicyclo[2.2.2]octanium group.

20

22. A pharmaceutical composition containing the compound according to claim 1 as an active ingredient.

23. The pharmaceutical composition according to claim 22, wherein
25 the pharmaceutical composition is a cholesterol-lowering agent.

24. The pharmaceutical composition according to claim 23, wherein
the pharmaceutical composition is a drug for the treatment or
prevention of any one of hyperlipidemia, arteriosclerosis, and syndrome
5 X.

25. The pharmaceutical composition according to claim 22, wherein
the pharmaceutical composition is a drug for the treatment or
prevention of cholestasis-caused hepatopathy.
10

26. The pharmaceutical composition according to claim 25, wherein
the pharmaceutical composition is a drug for the treatment or
prevention of primary biliary cirrhosis or primary sclerosing cholangitis.

15 27. The pharmaceutical composition according to claim 22, wherein
the pharmaceutical composition is a drug for the treatment or
prevention of obesity or fatty liver.

28. The pharmaceutical composition according to claim 22, wherein
20 the pharmaceutical composition is a drug for the treatment or
prevention of steatohepatitis.

29. A pharmaceutical composition for the treatment or prevention of
cholestasis-caused hepatopathy comprising an ileal bile acid
25 transporter inhibiting compound as an active ingredient.

30. The pharmaceutical composition according to claim 29, wherein
the pharmaceutical composition is a drug for the treatment or
prevention of any one of primary biliary cirrhosis and primary sclerosing
5 cholangitis.